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TITLE: **ES&H OVERSIGHT OF CONSTRUCTION ACTIVITIES**

1. PURPOSE

Establish a process within the Fermi Area Office (FAO) for providing performance-based monitoring of Fermilab's Environment, Safety and Health (ES&H) oversight of construction activities, including Line Item Projects (LI) and, as appropriate, General Plant Projects (GPP), Accelerator Improvement Projects (AIP), and Capital Equipment Projects (CE). The process described in this procedure is applicable to projects whether Fermilab, Fermilab subcontractors, Fermilab sub-tier subcontractors, DOE prime contractors, or their subcontractors and sub-tier contractors perform the work.

2. SCOPE

This procedure applies to Fermilab construction activities, including LI Projects and, as appropriate, GPP, AIP, and CE Projects.

3. PREREQUISITES

This procedure is to be implemented as part of the project planning and execution process. This procedure does not represent a work authorization system.

4. REFERENCES

- 4.1 Fermi Area Office Functions, Responsibilities, and Authorities Manual (FRAM) (FAO M-411.1)
- 4.2 Project Management for the Acquisition of Capital Assets, DOE M 413.3-1
- 4.3 Program and Project Management for the Acquisition of Capital Assets, DOE O 413.3

5. DEFINITIONS

- 5.1 Accelerator Improvement Projects – Projects involving upgrades/additions to existing accelerators at Fermilab and costing less than \$5 million.
- 5.2 Capital Equipment Projects – any capital equipment funded project.
- 5.3 General Plant Projects - Miscellaneous minor new construction projects of a general nature, the total estimated cost of which may not exceed the congressional authorization of \$5 million per project.

- 5.4 Line Item Project - Those separately identified project activities (greater than \$5 million) that are submitted for funding and are specifically reviewed by Congress.

6. RESPONSIBILITIES

6.1 FAO Manager

- 6.1.1 Assigns FAO Programs, Projects and Facility (PP&F) Project Directors and FAO Environment, Safety & Health and Program Support (ESH&PS) Team Members for LI Projects, GPPs, AIP, and CE Projects, as appropriate.
- 6.1.2 Directs ES&H Oversight of Construction Activities.
- 6.1.3 Approves ES&H Oversight of Construction Activities Procedure.

6.2 PP&F Project Director

- 6.2.1 Conducts construction safety inspections for assigned projects based on OSHA requirements, DOE and Fermilab policies and procedures, and environmental permit conditions, as appropriate.
- 6.2.2 Consults with ESH&PS Team Leader for assignment of ESH&PS Team member to assist on the project oversight and with other DOE organizations, if specialized technical assistance is needed.
- 6.2.3 Determines frequency of construction safety inspections based on the type of construction activity and level of hazard. Some GPP, AIP, and CE Projects are essentially indistinguishable from operations and will be assessed during operational reviews conducted by FAO ESH&PS staff.
- 6.2.4 Documents construction safety inspections. Meeting minutes and/or inspection report will be prepared and distributed to affected DOE and Fermilab personnel. A construction safety inspection checklist will be used as the basis for the review. This checklist may be supplemented with job-specific checklists, as appropriate. A sample checklist is included in Attachment A.
- 6.2.5 Resolves ES&H issues that require immediate attention with the Fermilab Construction Coordinator or Fermilab ES&H Representative participating in the inspection.
- 6.2.6 Evaluates, in a timely manner, corrective actions that have been taken. The seriousness of the safety issue and/or infraction will dictate the expediency of the corrective action and the follow-up review.
- 6.2.7 Documents operational status of the project by a description of work being performed, the status of project completion, and compliance with ES&H expectations and requirements.

- 6.3 ESH&PS Team Leader (in consultation with the PP&F Team Leader)
 - 6.3.1 Consults with FAO Project Directors on level of ES&H oversight to be provided for specific DOE or Fermilab construction activities.
 - 6.3.2 Recommends to FAO Manager assignment of an ESH&PS Team member for technical assistance to Project Directors, as appropriate.
 - 6.3.3 Oversees participation by ESH&PS Team staff in ES&H oversight activities along with FAO Project Directors and PP&F Team Leader.
 - 6.3.4 Reviews inspection checklists developed during the inspections by the Project Directors to reflect ES&H concerns.
 - 6.3.5 Reviews on a regular basis the status of ES&H concerns associated with DOE or Fermilab construction activities as reflected in the Construction Safety Inspection Checklist.
 - 6.3.6 Works with the Project Directors to resolve identified ES&H concerns and to evaluate corrective actions completed.
 - 6.3.7 Reports to FAO Manager and Deputy Manager periodically on the status of ES&H concerns associated with DOE and Fermilab construction activities.

7. PROCEDURE

- 7.1 FAO Manager assigns a PP&F Project Director and an ESH&PS Team member to a construction project or projects, as needed.
- 7.2 PP&F Team Leader and PP&F Project Director, after consultation with the ESH&PS Team Leader, determines frequency of project inspections based on type of construction activity, level of hazard, and relevant ES&H concerns.
- 7.3 PP&F Project Director and ESH&PS Team member, as needed, set schedule for inspections coordinating with Fermilab's assigned Construction Coordinator and Fermilab's ES&H Representative.
- 7.4 PP&F Project Director performs inspection with participation of ESH&PS Team member, as needed, based on OSHA regulations, DOE and Fermilab policies and procedures, and any environmental permit conditions. Fermilab's assigned Construction Coordinator and ES&H Representative should also participate in the inspection. Additionally, Fermilab subcontractor management representative may participate in the inspection.
- 7.5 PP&F Project Director resolves safety issues with ESH&PS Team member, Fermilab Construction Coordinator, and ES&H Representative.
- 7.6 PP&F Project Director follows up on safety issues and/or infractions identified during a particular construction safety inspection and ascertains that they have been corrected.

- 7.8 PP&F Project Director documents construction safety inspection. Meeting minutes should be prepared and distributed to affected DOE and Fermilab personnel. A construction safety inspection checklist will be used as the basis for the review. This checklist may be supplemented with job-specific checklists, as appropriate. A sample checklist is included in Attachment A.
- 7.9 PP&F Project Director may also use the meeting minutes to describe the work being done on the day of the inspection, the status of project completion (using percent complete, hours worked, etc.), and document any work-related injury information.
- 7.10 PP&F Project Director, in consultation with the PP&F and ESH&PS Team Leaders, terminates inspection program upon completion of construction activities.

8. ATTACHMENT/APPENDICES

- 8.1 Attachment A – Sample Construction Safety Inspection Checklist (Rev. 2)

Attachment A

Construction Safety Inspection Checklist

DOE Contractors, Subcontractors and Sub-Tier Subcontractors

Fermilab Subcontractors and Sub-Tier Subcontractors

Purpose of Inspection:

Inspection Participants:

Description of Construction Activities:

Two week look ahead:

Administrative Controls	
Training:	___ Fermilab ___ Subcontractor ___ Sub Tier ___ DOE Prime
Orientation:	
Competent Person:	
Hazard Analysis:	
Toolbox Sessions:	
Other:	
Hazard Analysis:	___ Fermilab ___ Subcontractor ___ Sub Tier ___ DOE Prime
Hazard Analysis Program:	
Toolbox Sessions:	
PPE Identification:	
Other:	
Permits:	___ Fermilab ___ Subcontractor ___ Sub Tier ___ DOE Prime
Work Permits:	
Environmental Permits:	
Other:	
Sampling/Surveillance:	___ Fermilab ___ Subcontractor ___ Sub Tier ___ DOE Prime
Sampling:	
Surveillance:	
ES&H Reporting:	___ Fermilab ___ Subcontractor ___ Sub Tier ___ DOE Prime
Inspection Findings:	
Safety Violations:	
Injuries or Illnesses:	
Occurrence Reporting:	

Physical Controls

Housekeeping:	__ Fermilab __ Subcontractor __ Sub Tier __ DOE Prime
Fire Protection:	__ Fermilab __ Subcontractor __ Sub Tier __ DOE Prime
Excavation:	__ Fermilab __ Subcontractor __ Sub Tier __ DOE Prime
Hazard Communication:	__ Fermilab __ Subcontractor __ Sub Tier __ DOE Prime
Cranes, Rigging:	__ Fermilab __ Subcontractor __ Sub Tier __ DOE Prime
Heavy Equipment:	__ Fermilab __ Subcontractor __ Sub Tier __ DOE Prime
Electrical:	__ Fermilab __ Subcontractor __ Sub Tier __ DOE Prime
Barricades:	__ Fermilab __ Subcontractor __ Sub Tier __ DOE Prime
Ladders:	__ Fermilab __ Subcontractor __ Sub Tier __ DOE Prime
Scaffolding:	__ Fermilab __ Subcontractor __ Sub Tier __ DOE Prime
Fall Protection:	__ Fermilab __ Subcontractor __ Sub Tier __ DOE Prime
Road Construction:	__ Fermilab __ Subcontractor __ Sub Tier __ DOE Prime
Gas Cylinders:	__ Fermilab __ Subcontractor __ Sub Tier __ DOE Prime
Concrete Construction:	__ Fermilab __ Subcontractor __ Sub Tier __ DOE Prime
Steel Erection:	__ Fermilab __ Subcontractor __ Sub Tier __ DOE Prime
Emergency Response:	__ Fermilab __ Subcontractor __ Sub Tier __ DOE Prime
Other:	__ Fermilab __ Subcontractor __ Sub Tier __ DOE Prime